

CLAIM AMENDMENTS:

Please amend the claims as follows:

- 1-5. (Cancelled).
6. (Previously presented) A method for generating an error detection code of a data sector with sector data information and main data comprising:
 - generating a first error detection code according to the sector data information and the main data, wherein the sector data information is substituted by a first substitutional value;
 - generating a second error detection code according to the sector data information and the main data, wherein the main data is substituted by a second substitutional value; and
 - generating the error detection code by on operating the first error detection code, the second error detection code and a correction constant, wherein the correction constant is derived depending on the first substitutional value and the second substitutional value;
- wherein the first error correction code is generated when the main data is read from a host.

7. (Original) The method as claimed in claim 6, wherein the error detection code is generated by performing exclusive-OR operation of the first error detection code, the second error detection code and the correction constant.

8. (Previously presented) The method as claimed in claim 6, wherein the correction constant is not taken into consideration when the first substitutional value and the second substitutional value are both substituted by zero.

9. (Original) The method as claimed in claim 6, wherein the sector data information comprises identification data (ID), ID error correction code (IED), and reserve data (RSV).

10. (Previously presented) A method for generating an error detection code of a data sector with sector data information and main data comprising:

generating a first error detection code according to the sector data information and the main data, wherein the sector data information is substituted by a first substitutional value;

generating a second error detection code according to the sector data information; and

generating the error detection code by on operating the first error detection code, the second error detection code and a correction constant, wherein the correction constant is derived depending on the first substitutional value;

wherein when generating the second error detection code, the main data is substituted by 0.

11. (Original) The method as claimed in claim 10, wherein the first error detection code is generated when the main data is reading from a host.

12. (Original) The method as claimed in claim 10, wherein the error detection code is generated by performing exclusive-OR operation of the first error detection code, the second error detection code and the correction constant.

13. (Previously presented) The method as claimed in claim 10, wherein when generating the second error detection code, a formula is provided for skip considering the main data.

14. (Previously presented) The method as claimed in claim 10, wherein when the first substitutional value is substituted by zero, the correction constant is not taken into consideration.

15. (Previously presented) The method as claimed in claim 10, wherein the sector data information comprises identification data (ID), ID error correction code (IED), and reserve data (RSV).

16. (Previously presented) A method for generating a plurality of error detection codes of a plurality of data sectors with a plurality of different sector data information and same main data comprising:

generating a first error detection code according to the same main data, wherein each different sector data information are respectively substituted by a corresponding first substitutional value;

generating a plurality of second error detection codes according to each corresponding different sector data information; and

generating the plurality of error detection codes by operating on the first error detection code, the corresponding plurality of the second error detection codes, and a correction constant;

wherein the first error detection code is generated when the same main data is read from a host.

17. (Previously presented) The method as claimed in claim 16, wherein the plurality of error detection codes are generated by performing exclusive-OR operation of the first error detection code, the plurality of second error detection codes, and the correction constant.

18. (Previously presented) The method as claimed in claim 16, wherein when the plurality of second error detection codes are generated only according to

each different sector data information by providing a formula to skip considering the following main data.

19. (Previously presented) The method as claimed in claim 16, wherein when the second error detection code is generated according to both the corresponding sector data information and the same main data, the same main data is substituted by a second substitutational value.

20. (Original) The method as claimed in claim 19, wherein the correction constant is derived depending on the first substitutational value and the second substitutational value.

21. (Previously presented) The method as claimed in claim 20, wherein when the corresponding first substitutational value and the second substitutational value are both substituted by zero, the correction constant is not taken into consideration.

22. (Previously presented) The method as claimed in claim 16, wherein the sector data information comprises identification data (ID), ID error correction code (IED), and reserve data (RSV).